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ABSTRACT

Enrollment management includes the processes and activities that influence the size, shape, and characteristics of a student body by directing institutional efforts in marketing, recruitment, admissions, pricing, and financial aid. Institutional research plays an essential, if not the key, role in enrollment management. This report discusses the types of research questions that must be addressed at each stage of the student college experience; reviews the literature on enrollment management; lists performance monitoring indicators during the recruitment and retention phases and the appropriate collection methods for such data; describes strategies for data management; lists sample student tracking data elements relevant to the entry phase, term-by-term progress assessment, and follow-up of graduates and leavers; and describes the purposes and uses of regression analysis, factor analysis, cluster analysis, and discriminant analysis. The following four principles for data application are also discussed: (1) constructing separate longitudinal files for tracking selected student cohorts; (2) including data elements for analysis of specific student subgroups; (3) conducting survey research to illuminate key student decision points; and (4) examining both the college policy environment, and the views and needs of the student. Data presentation principles are also discussed, including matching format to the analytical sophistication and learning preferences of recipients of the information; avoiding statistical jargon; and using executive summaries, graphics, tables, analogies, and verbal aids appropriately. Sample reporting tables and graphs, and a 30-item bibliography are included. (PAA)

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INSTITUTIONAL RESEARCH:

THE KEY TO SUCCESSFUL ENROLLMENT MANAGEMENT

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May 1991

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INSTITUTIONAL RESEARCH: THE KEY TO SUCCESSFUL ENROLLMENT MANAGEMENT

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Introduction

Well-designed and executed institutional research is the key to successful enrollment management. But what exactly is meant by enrollment management? The definition cited most often (Hossler, 1984) defines enrollment management as

> a process or an activity that influences the size, the shape, and the characteristics of a student body by directing institutional efforts in marketing, recruitment, and admissions, as well as pricing and financial aid. In addition, the process exerts a significant influence on academic advising, the institutional research agenda, orientation, retention studies, and student services (p. 6).

Conceptually, enrollment management links research on individual college choice, student-institution fit, and student retention. Although it is an organizational construct, enrollment management is founded on information, largely derived from institutional research and policy evaluation (Hossler and Kemerer, 1986). To be successful, enrollment managers must understand the forces that influence individual decisions about college choice and persistence. This micro-level understanding is prerequisite to

answering institutional policy-level questions. It is useful to analyze student enrollment in a linear student flow model, from initial inquiry through application, enrollment, persistence, completion, and continuing to post-graduate follow-up. Enrollment managers need answers to numerous questions at each stage of student experience with the institution. For example:

* How widely known is the college? How do prospective students view the college? What other institutions are considered by prospective students?

* How can we increase the size of the applicant pool? How can we attract the students we would most like to enroll?

* How can we improve yield? How effective are our existing recruitment activities? What factors differentiate our college from its closest competitors and influence admitted students' final choices?

* What influence does financial aid have on student decisions to enroll and persist? What is the perceived campus culture or climate, and what influence does it have on retention and attrition?

* What proportion of a freshman class persists to graduation? Do any student subgroups exhibit significantly higher than

average attrition? Why do some students persist while others do not?

* How successful are our alumni in their post-graduate endeavors? What proportion remain involved with the institution? What characteristics describe alumni donors?

This sampling of student decision and institutional policy questions captures the comprehensive, long-range nature of an enrollment management program. The results of recruitment are measured not just in terms of the number and characteristics of new students who enroll but by the number who become well-adapted, successful students and productive alumni. "This preenrollment and postenrollment analysis of student enrollment captures the unifying themes of an enrollment management system" (Hossler and Kemerer, 1986, p. 7).

Literature

The literature pertinent to enrollment management falls into two broad types. First is the recent body of work explicitly concerning enrollment management as an organizational construct or process. Written within the past ten years, this literature is largely responsible for the spread of the concept and language of enrollment management. The second and more diverse body of literature consists of the research and policy studies that form the necessary information infrastructure supporting the successful

implementation of an enrollment management process. Research into student college choice, student-institution fit, pricing and financial aid, student attrition, and other related topics can all be considered part of the enrollment management literature. Understanding student behavior is prerequisite to influencing it.

Since enrollment management requires the integration of several institutional functions, much of the early literature on the topic focused on organizational structure. Kemerer, Baldridge, and Green (1982) identified four enrollment management models, each requiring varying degrees of administrative support or centralization. Regardless of what model eventually emerges, the starting place is usually an enrollment management committee. The committee is an inexpensive and non-disruptive way to further communications about enrollment issues, but commonly lacks the authority and resources to bring about substantial change. Designation of an enrollment management coordinator provides a locus of responsibility for program coordination, but the coordinator, like the committee, usually has little formal authority and campus functional units continue to operate independently. One step beyond the coordinator approach is the matrix model. Headed by a senior level administrator such as an academic vice-president, the matrix consists of several modules, each grouping together offices concerned with a particular aspect of enrollment management, such as recruitment, retention, or assessment. The fourth and most centralized model is the

enrollment management division. The division consists of offices with direct responsibility for enrollment management activities united under the formal leadership of a senior level administrator. An enrollment management division might include admissions, registrations, financial aid, public relations, advising, career planning, retention, institutional research, and alumni affairs. The head of the division has authority over resources and staff and can direct implementation of an enrollment management plan, but this model may involve a great deal of campus re-organization with the attendant political and fiscal costs.

Several studies in the mid-Eighties attempted to learn how widespread enrollment management programs were. A survey conducted by the College Board (Novak and Weiss, 1984) reported that almost 7 of every 10 responding institutions indicated they were using one of the enrollment management models described above. Another survey (Pollock and Wolf, 1989) found some type of enrollment management program on three of every five campuses. Relatively small, highly selective independent institutions were more likely to have programs than larger, public institutions with less competitive admissions.

Though many institutions claim to have implemented an enrollment management program, some authors have argued that implementing effective programs has proven difficult. Writing at the end of the Eighties, Dolence (1989-90) asserted that over half

of the institutions that tried to establish an enrollment management program were unsuccessful, largely due to "flawed planning, insufficient participation, a seemingly insignificant oversight, or a basic design flaw" (p. 1). Based on his evaluation of 22 institutions who claimed to have attempted enrollment management, Dolence identified 12 criteria for evaluating its effectiveness. These were leadership, comprehensiveness, timing, systems, resources, strategies, key performance indicators, definitions/classifications, participation, assessments, evaluation, and documentation. Earlier in the decade, Claffey and Hossler (1986) described effective enrollment management as holistic in vision, proactive in stance, informed in decisionmaking, flexible and tolerant in climate, and led by the highest levels of administration. Among the necessary conditions for effective enrollment management, however, they argued that information was paramount:

> Planning and evaluation are at the heart of an enrollment management system, but the single most critical element in all of this effort is accurate, timely, usable information. Thus, our ability to influence our enrollments to any degree is a direct function of the information...available. (p. 106.)

Writing a year later, Hossler (1987b) argued that in practice enrollment management had simply become a new term for the work of

admissions offices. Would-be enrollment managers were not developing the requisite knowledge base in student college choice, student-institution fit, student retention, the impact of financial aid, and other research but rather were changing titles and rearranging organizational charts. This is where the second broad category of enrollment management literature, plus local institutional research, becomes essential.

A growing body of literature exists to provide enrollment managers with a foundation of knowledge for interpreting their own campus research and experience. In each area of enrollment management, useful references are available. A few are cited here as guideposts to further study. The recruitment literature includes research on student college choice (Litten, Sullivan, and Choice, 1983; Zemsky and Oedel, 1983; Lay and Endo, 1987), student-institution fit (Williams, 1986), and the impact of pricing and financial aid (Litten, 1984; Leslie and Brinkman, 1987; Huff, 1989). The student persistence literature includes several useful reviews and anthologies (Spady, 1970; Cope and Hannah, 1975; Pantages and Creedon, 1978; Pascarella, 1982; Tinto, 1987) as well as innumerable case studies.

In addition to the findings of educational research found in the scholarly literature, the enrollment manager relies heavily on institution-specific information. Useful articles on using institutional research for enrollment management include Davis-Van

Atta and Carrier (1986) and Glover (1986). The balance of this essay explores how institutional research can provide effective support to enrollment management efforts.

Data

The information needs of the enrollment manager fall into two categories: performance monitoring indicators (PMIs) and policy research and analysis. To track and evaluate the implementation and success of an enrollment management program, specific quantifiable measures are needed:

> Without the development of an effective performance indicator system enrollment management, as a truly innovative concept, will diminish in stature and will be viewed by many as just another administrative black hole--another office spending money without a clear definition or purpose. (Costello, 1989, p.70).

Ideally the PMIs are developed with the consultation of the offices responsible for each stage of the enrollment process, and are used by the enrollment manager to evaluate the performance of each unit as well as to oversee the broader institutional enrollment picture. To assist unit directors and the enrollment management planning team in developing strategies for achieving the goals associated with the PMIs, institutional research may conduct in-depth policy studies on specific issues. Examples will be discussed in the next

section on data analysis. The scope of institutional research support of enrollment management is captured in Figure 1, which displays an enrollment management information needs matrix. Performance monitoring indicators and policy research and analysis are needed at all six stages of enrollment management. The remainder of this section will focus on data: what data are needed, what sources are available, how the data are best organized for enrollment management uses.

What data are needed? The coordinating and integrating functions of enrollment management are facilitated by the availability of a comprehensive set of agreed-upon performance monitoring indicators. The PMIs are typically simple counts or ratios that report the status of enrollment at a point in time. Figure 2 shows some PMIs for the recruitment phase (encompassing the first three stages of student decision, namely inquiry, application, and enrollment) as examples. Key PMIs may be tracked daily during the application and registration period. An enrollment management plan would have established targets or expectations for each of these indicators. At a minimum, the enrollment management team should have clear expectations about the number of applications, offers of admission, and resulting enrollments anticipated for the planning term. The mix of full- and part-time students, and the credit hours or full-time-equivalents they generate would usually have been forecast for budget planning purposes and also routinely tracked during the

Enrollment Management Information Needs Matrix

	Inquiry	Application	Enrollment	Persistence	Completion	Alumni
Performance Monitoring Indicators						
Policy Research and Analysis						

Figure 1

Performance Monitoring Indicators
Recruitment Phase

Number of mail and phone inquiries
Number of applications received
Number of acceptances offered
Percent of applicants offered admission
Number of accepted applicants enrolling
Percent of accepted applicants enrolling
Full-time-equivalent enrollment
Student average courseload
Number of full-and part-time first-time freshmen
Number of new transfer students
Number of exceptional and conditional admits
Number, type, and amount of financial aid awards
Share of local area residents/high school grads enrolling
Racial/ethnic composition of entering students
Mean/distribution of SAT scores of entering students
High school GPA/rank distributions of entering students
Predicted freshman academic performance
Number and percent of entering students needing remediation
Distribution of enrollment by college and program
Distribution of enrollment by class location and time

Figure 2

registration period. Since enrollment management concerns the characteristics as well as magnitude of enrollment, other attributes, such as the SAT score distribution of applicants, admits, and enrollees, may be monitored. The racial/ethnic composition at each stage may be reported to help in monitoring achievement of desegregation and diversity goals. The distribution of enrollment by college, program, discipline, class location and time would be monitored for departmental faculty and facilities planning.

Performance monitoring indicators are also useful for evaluating student retention efforts. Figure 3 displays some possible PMIs for the retention phase, broadly defined to include not only student persistence to graduation but also postgraduate association with the institution, as active alumni, contributors, or continuing education students.

The data needed for policy research and analysis depend on the particular policy at issue. Data in the student information system will usually be necessary but frequently not sufficient. Original research, including surveys, focus groups, library research, and peer institution data collection efforts, may be needed.

Data sources. Much of the data needed for monitoring the performance of the enrollment management effort--the PMIs-- come directly from the information gathered from student applications

Performance Monitoring Indicators
Retention Phase

Retention rate to second semester

Rate of completion of needed remediation

Grade distributions in freshman English and mathematics

Number and percent of academic disqualifications

Persistence of entering class to sophomore/junior/senior status

Percent of entering class graduating within 6 years

Student satisfaction/goal achievement ratings

Percent of graduates obtaining program-related employment

Percent transferring or entering graduate school

Percent earning higher degrees

Number and percent dues-paying alumni

Number and percent endowment/annual fund donors

Number and percent enrolling in continuing education courses

Figure 3

and registrations transactions. The typical campus student information system contains both term enrollment and student history or transcript files that together include demographic, course enrollment, and performance data useful for enrollment monitoring purposes. Special record-keeping procedures may need to be implemented beyond those commonly in place, however. For example, a system may need to be implemented in admissions for tracking mail and phone inquiries. Surveys may be needed to gather background information beyond that required in the college application. Follow-up surveys will be necessary to learn post-enrollment outcomes.

The data needed for policy analysis are as diverse as the issues to be investigated, and their sources almost as varied. In addition to data available from traditional institutional information systems, policy analyses may require comparative information from peer institutions, issue-related information gathered in mail or telephone surveys, and qualitative information learned from focus group research. Standardized questionnaires, peer analyses, and market research are available from commercial enterprises as an alternative or supplement to institutionally-designed studies.

Organizing the data. While collecting the data needed for effective enrollment management is usually not difficult, the more frequent problem to its successful application is its organization.

Standard transcript files and frozen term files are not ideal for student flow studies. Transcript files contain elements that are periodically updated, with old values usually written over and lost. Term files are often archived off-line and pulling selected elements from several such files can involve extensive programming and media manipulation. Survey research may have been conducted in isolation from record-based studies and survey data stored in separate datasets, perhaps on a microcomputer disk. Adherence to four principles can greatly facilitate the application of data to enrollment management decisionmaking:

1. Construct separate longitudinal files for tracking selected student cohorts. Since enrollment management encompasses student experiences with an institution from inquiry to post-graduation, data systems parallelling this student flow continuum are most useful. In place of discrete files established for other purposes, most institutions will benefit from the construction of separate longitudinal cohort files for enrollment management analyses (Ewell, 1987; Ewell, Parker and Jones, 1988; Bers, 1989; Palmer, 1990). Free-standing tracking files for selected entering cohorts of students preserve key data values and facilitate data analysis. Figure 4 displays data elements commonly included in student tracking systems. The data elements fall into three broad categories. First are student attributes such as demographic and academic background variables usually

Sample Data Elements for Student Tracking System

Student Attributes at Entry

Student ID number (SSN)
Date of birth
Gender
Race/ethnicity
Native language
High school attended/class rank and GPA
Admissions/placement test scores
Prior college attended/transfer credits
Financial aid need/award type and level
Reason for attending/goal at this institution
Program of study
Resident/commuter status

Student Progress Term by Term

Remediation attempted and completed
Credit hours attempted and earned this term
Term grade point average
Academic standing
Program of study
Cumulative credits attempted and earned at end of term
Cumulative GPA at end of term
Degree or certificate awarded

Follow-up Indicators, Graduates and Leavers

Transfer/graduate school
Credits accepted/lost in transfer
Transfer/graduate school program
Cumulative credits earned/GPA at transfer school
Degree awarded/program of degree
Employment status
Relationship of job to college program
Annual salary
Employer/industry and location
Employer ratings of student job preparation
Alumni association/fund donor

Figure 4

collected as part of the application process. Next are student progress variables recorded each term, such as credit hours attempted and earned and term grade point average. Finally are outcome measures for graduates and those who leave without completing a program. These may include further education and employment indicators. In addition to determining the data elements to include, several other questions must be answered in designing a tracking system, such as which cohorts to follow, and for how long (Ewell, 1987). Because tracking numerous cohorts simultaneously is complex, and because there usually is little variation in successive years (unless substantial changes in institutional policies or entering student characteristics have occurred), it is generally sufficient to track classes entering every third year. Most institutions will track only cohorts entering in fall terms, though spring or summer entrants if substantial in number or notably different in characteristics may warrant separate tracking. Students should be tracked for six to eight years to allow time for part-time students and stop-outs whose attendance is interrupted to graduate.

2. Include data elements allowing analysis of specific student subgroups of interest. In addition to the obvious demographic variables included as a matter of course, ensure that data elements are incorporated in the tracking file identifying subgroups of students of research interest at your

institution. While it is usually possible to go back to original files to obtain data whose need was not foreseen, this can be cumbersome. It is better to anticipate likely research questions and include the requisite data elements from the start. These may include identifiers for remedial students, non-native English speakers, participants in special programs, athletes, scholarship recipients, or others groups of special concern.

3. Conduct survey research to illuminate key student decision points. Survey research is most useful when designed and implemented to add to information yielded by the tracking system. Administer surveys to investigate student motivations, attitudes, and decision-making processes at key points in their college experience: at entry, after their first semester, immediately after they leave. Add key survey response data to fields reserved for this purpose in the longitudinal cohort file, or maintain separate files for survey data that can be easily linked (via the SSN) to the longitudinal data.

4. Zoom in and out to ensure data relevancy. To ensure that the data collected are what are needed, and that they are organized in a form facilitating their use, the institutional researcher should continuously monitor the policy environment and anticipate the information needs of decisionmakers, who

may have the bigger picture in mind. This follows the insight of Claffey and Hossler (1986) that enrollment management "involves a holistic view of the institution and the environment (wide-angle lens) and a focused view of the student (zoom lens)." The institutional researcher needs to zoom in and out, looking in detail at student needs and progress but within the context of the larger institutional perspective. By identifying patterns of student behavior that together explain trends in total enrollment, the researcher provides data that have meaning to executive managers whose focus may be on total FTEs and budget dollars.

Analysis

The analytical techniques employed in support of enrollment management range from the simplest to the most sophisticated. The analysis needed for the performance monitoring function is usually elementary. Calculations of yield ratios, percent change year-to-year in applications, or retention rates for student subcategories--are simple but necessary and useful. The biggest hurdle usually is in defining the base population or time period for analysis; the actual calculation of the indicators is usually easy. This is true even for estimating probabilities for simple cohort survival models. Crude survival rates can be calculated by division operations answering the questions "how many students of type A entering the college in term X were enrolled in term Y" or "how many students enrolled last term (who did not graduate) enrolled

this term?" The resulting percentages can be arranged in matrices displaying approximate student progression patterns. Neither of these shortcut methods allows for detailed analysis of individual student patterns of attendance, however (Ewell, 1987).

Data gathered in surveys and focus groups conducted to learn more about student decisionmaking at key points in the enrollment continuum can be analyzed on their own using appropriate techniques and may also be entered into more sophisticated models. The qualitative findings from focus group interviews are often enlightening by themselves, and can identify factors for inclusion in subsequent, more quantitative analyses. Focus group research into college choice might identify net cost, distance from home, available social activities, and quality of student body as important factors. These subjective findings could be operationalized in hard data included in an objective analysis of institutional competition identified from admission test score mailing destinations (provided by commercial testing services).

Multivariate analytical techniques are common in the policy research supporting enrollment management strategies. While a discussion of the particular strengths and weaknesses and appropriate uses of each technique would require an essay of its own, some examples of applications to enrollment management follow.

1. Regression analysis. Multiple regression is commonly employed to predict freshman grade point averages from a linear combination of SAT scores, achievement test scores, high school GPA or percentile rank, and/or other variables. These predictions can be used in admissions decisions, selecting financial aid recipients, and as independent variables in yield and retention models. Stepwise logistic regression might be used to determine predictors of student decisions to enroll or not, or to investigate factors associated with academic dismissal or satisfactory performance after one term in college.

2. Factor analysis. Factor analysis can be used to identify and define the underlying dimensions or factors contained in a larger set of variables. An application in enrollment management would be identifying underlying "product themes" in the confusing enrollment choices of continuing education students.

3. Cluster analysis. Cluster analysis can be used to place cases into groups or clusters suggested by the data rather than by a priori definition. By balancing within-cluster homogeneity, between-cluster distance, and cluster size, the analyst can derive a cluster set of useful in number and differentiation. Examples of cluster analysis in enrollment management research include objectively classifying

institutions in terms of size, selectivity, yield rates, SAT score means, student costs, and other available quantitative data, or determining prototypical student retention patterns, or identifying neighborhood lifestyle clusters in the surrounding service area for marketing purposes.

4. Discriminant analysis. To statistically distinguish between two or more groups of cases, discriminant analysis may be used. After the researcher identifies a collection of interval-level variables on which the groups are expected to differ, the technique forms one or more linear combinations among them maximizing the separation of the groups. The analysis might be used to identify factors associated with graduates as opposed to nongraduates.

Obviously, the examples could be multiplied, and other techniques discussed. The purpose of the above was to suggest some of the types of analytical tools that can be applied to the wide range of enrollment management research.

Communication

To be effective, information must be communicated and understood. The fundamental principles of data presentation (Clagett and Huntington, 1990) apply to enrollment management information sharing:

1. Know what information is needed. The most fundamental principle of all is to provide decisionmakers with the data they need. This chapter has identified numerous examples of the information useful to enrollment managers. Ideally, the institutional researcher is part of the enrollment management team and receives continuous feedback on its data needs. And, as argued earlier, the enrollment management plan should have identified key performance indicators at its inception.

2. Know when the information is needed. Today's analysis can't influence a decision made yesterday. Both monitoring and policy research information need to be available at the appropriate time to be most useful. At one extreme, some performance indicators may be updated daily. For example, registration statistics may be reported every day (see Figure 5). At the other extreme, a particular policy analysis may have been conducted for the first time at the institution. Though it may be a one-time analysis, it is critical that its results be shared prior to the time policy is decided.

3. Match format to analytical sophistication and learning preferences of recipients. While you must employ the most appropriate tools based on your judgment as a research professional, you must present your findings in ways accessible to your audience. A research paradigm to identify "top quality" applicants and build a related admissions rating procedure, for

DAILY FALL REGISTRATION STATUS REPORT

As of August 22, 1990
With 9 Days Remaining in the Registration Period

	Fall 1990	Fall 1989	Percent Change
Total college			
Headcount	8,782	8,478	3.6%
Course enrollments	22,997	22,966	0.1%
Credit hours	71,566	70,912	0.9%
Average credit load	8.1	8.4	
Main campus			
Course enrollments	20,859	20,986	-0.6%
Credit hours	64,880	64,642	0.4%
Extension locations			
Course enrollments	2,138	1,980	8.0%
Credit hours	6,686	6,270	6.6%
Total paid hours	64,183	61,493	4.4%
Total unpaid hours	7,383	9,419	-21.6%

Figure 5

example, may use path, factor, and discriminant analyses. In sharing the results with an enrollment management team not versed in such techniques, it is best to focus on what was learned rather than how you learned it. If you lose people in long discussions of your methodology, the valuable insights you may have discovered may be lost as well. Fortunately, many useful enrollment management analyses can be quite simple--especially those used for monitoring purposes. Simple percentages and annual changes in magnitude can provide a first report on admissions yield, for example (Figure 6).

4. Focus on one or two research questions at a time. While most appropriate to oral presentations, this is a good guideline for most written reports as well. Although enrollment management is a comprehensive concept and the information it requires broad and extensive, a series of brief reports, each focused on one or two policy issues will generally be more effective than a larger, all-inclusive analysis. Of course, the purpose of the analysis may dictate its scope. A report on student progression through a student flow model may cover the entire spectrum of enrollment management, but in-depth investigations of individual student decision points might be better shared in a series of reports.

5. Include a brief summary. An executive summary is not only a courtesy to your reader, but may mean the difference between your study being read or not being read. A large report lacking a summary may not be read at all; with an overview to spark

UNDERGRADUATE YIELD ANALYSIS
Fall 1989-90

	Fall 1990	Fall 1989	Change
First-time Freshmen			
Applications	14,942	16,332	(1,390)
Acceptances	9,049	9,024	25
Pct.Accept/Apply	61	55	
Enrolled	3,241	3,388	(147)
Pct.Enroll/Accept	36	38	
Transfer Students			
Applications	6,800	6,830	(30)
Acceptances	4,261	4,616	(355)
Pct.Accept/Apply	63	68	
Enrolled	2,813	2,978	(165)
Pct.Enroll/Accept	66	65	

Figure 6

interest, it may be read in full. At the least, the reader will learn the major findings from reading the summary. The executive summary can be issued separately as a capsule report for wider distribution, with the full report only going to those who request it.

6. Eschew obfuscation! Keep your language as simple and direct as possible. Avoid statistical jargon. Never use two words when one will do.

7. Use graphics sparingly and correctly. The selective use of graphics can aid communication, but they must be used with discrimination and precision. The ease of graphing provided by microcomputer software has resulted in a proliferation of graphs in institutional research reports, not always to their benefit. The untutored can easily create misleading graphs, and even the skilled often use too many. But a few graphs can highlight important points and assist enrollment managers in understanding student trends. Horizontal bar graphs can be used to show comparisons of actual to projected enrollment by component (Figure 7); pie charts can show institutional market share (Figure 8) at a point in time.

8. Integrate tables and graphics into text or presentation. Avoid having page after page of tables or graphs with no text, or data separated from text so that the reader has to interrupt his or her flow to find a table on another page, or worse yet, in an

Actual and Projected Headcount
Fall 1990

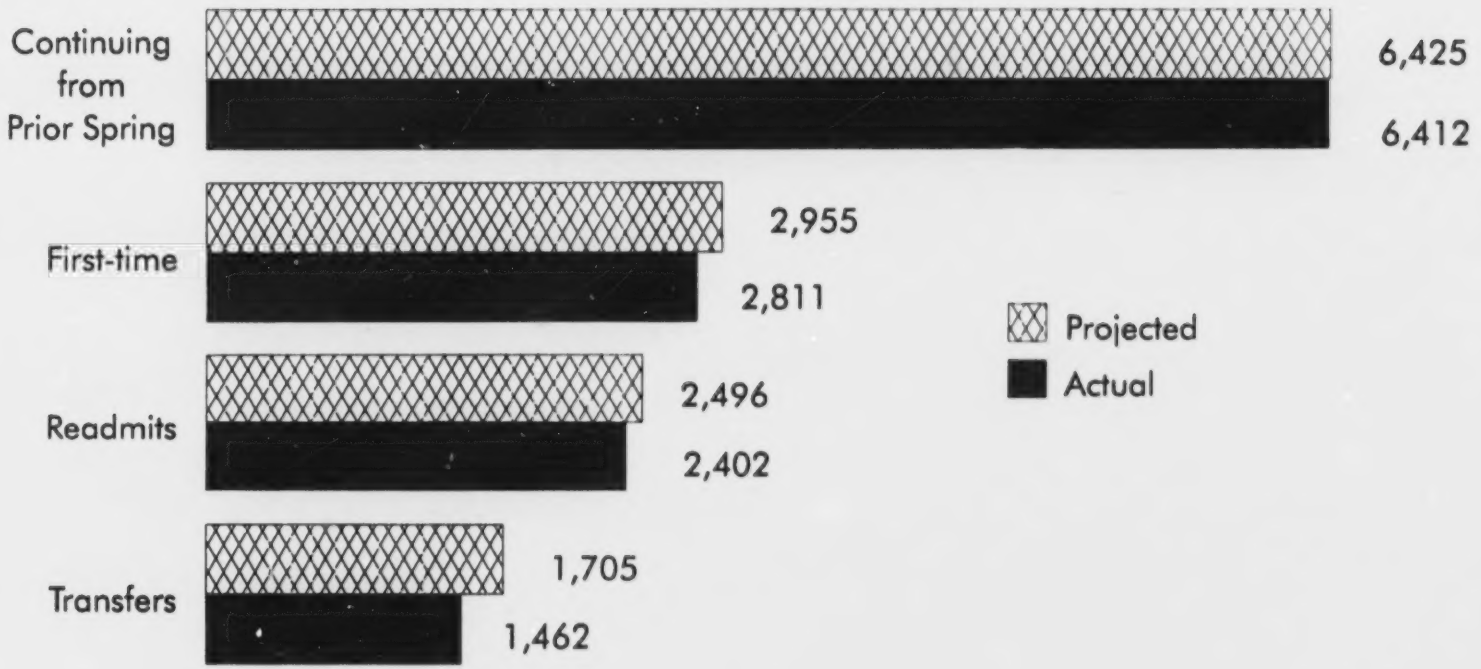
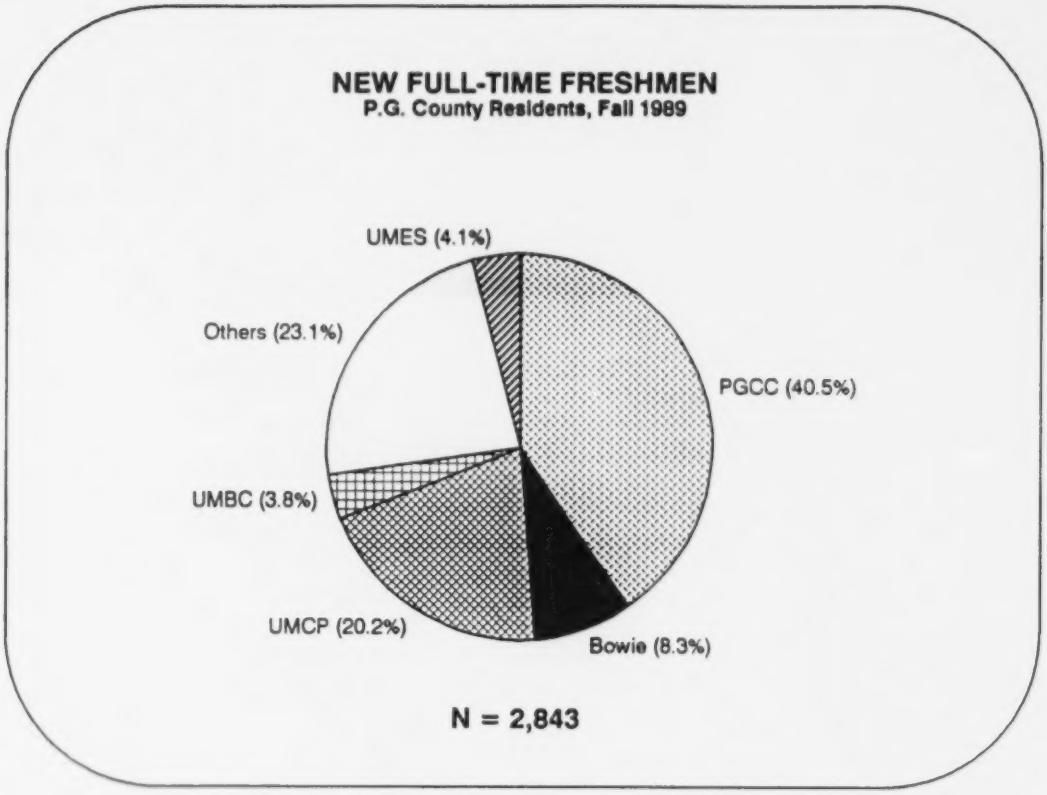


Figure 7



NEW FULL-TIME FRESHMEN

	1984	1985	1986	1987	1988	1989
Number of county residents enrolling as full-time freshmen at a state college or university	2,977	2,984	2,875	2,965	2,983	2,843
Percent enrolling at PGCC	42.9	39.4	41.8	42.9	43.7	40.5
Percent enrolling at major competitors:						
UMCP	29.1	30.1	25.0	24.4	20.0	20.2
Bowie	3.5	4.6	5.2	5.6	6.0	8.3
UMES	1.5	3.4	2.2	2.6	4.0	4.1
UMBC	3.6	3.2	4.7	3.4	4.4	3.8

Figure 8

appendix. While detailed appendices may be needed in some cases, pull out key data referenced in the narrative and place these data abstracts directly in the textual flow. Occasionally you may want to include detailed data in your presentation; try to make the display as clean as possible (see Figure 9 for a matrix display of student progression data). In some cases, an inserted graph can summarize the main point contained in an appended table. If the focus of a persistence study is graduation rates, a bar graph of cumulative percent graduating over time may be effective (see Figure 10).

9. Consider infrequent use of analogies, mnemonics, or other verbal aids. The key is infrequent; a reputation for cuteness can ruin credibility. Occasional use of catchy phrases can be effective. For example, "it takes two 40-year olds to equal one 18-year old" will get laughs but also make the point that FTEs will fall with a one-to-one replacement of declining high school graduates with older returning adults. The phrase works where a table of average credit hour loads by age cohort may not.

10. Repeat major findings in subsequent communications when opportune. Much can be learned from institutional research and policy analysis to inform the management of campus enrollment. While the nature of performance monitoring indicators is such that they are communicated frequently, findings from policy research may be shared when learned and then forgotten. Institutional research

STUDENT PROGRESSION MATRIX

	Entering Class of '85		Entering Class of '86		Entering Class of '87		Entering Class of '88		Entering Class of '89	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Enrolled, Fall '85	**4,269**	**100%**								
Enrolled/Graduated Fall '86	**3,548**	**83%**	3,937	100%						
freshmen	1,669	39%								
sophomores	1,840	43%								
juniors	39	1%								
seniors	0	0%								
Enrolled/Graduated Fall '87	**3,064**	**72%**	**3,348**	**85%**	**4,070**	**100%**				
freshmen	54	1%	1,553	39%						
sophomores	1,409	33%	1,763	45%						
juniors	1,553	36%	32	1%						
seniors	48	1%	0	0%						
graduated	0	0%	0	0%						
Enrolled/Graduated Fall '88	**2,882**	**68%**	**2,961**	**75%**	**3,385**	**83%**	**3,646**	**100%**		
freshmen	10	< 1%	36	1%	1,534	38%				
sophomores	136	3%	1,258	32%	1,819	45%				
juniors	1,322	31%	1,633	41%	32	1%				
seniors	1,393	33%	34	1%	0	0%				
graduated	21	< 1%	0	0%	0	0%				
Enrolled/Graduated Fall '89	**2,764**	**65%**	**2,830**	**72%**	**2,971**	**73%**	**3,096**	**85%**	**3,261**	**100%**
freshmen	2	< 1%	9	< 1%	46	1%	1,297	36%		
sophomores	31	1%	126	3%	1,313	32%	1,749	48%		
juniors	250	6%	1,199	30%	1,565	38%	50	1%		
seniors	1,422	33%	1,479	38%	47	1%	0	0%		
graduated	1,059	25%	17	< 1%	0	0%	0	0%		
Enrolled/Graduated Fall '90	**2,684**	**63%**	**2,711**	**69%**	**2,815**	**69%**	**2,761**	**76%**	**2,823**	**87%**
freshmen	2	< 1%	4	< 1%	13	< 1%	37	1%	1,099	34%
sophomores	17	< 1%	33	1%	145	4%	1,146	31%	1,687	52%
juniors	67	2%	182	5%	1,256	31%	1,518	42%	37	1%
seniors	426	10%	1,332	34%	1,387	34%	60	2%	0	0%
graduated	2,172	51%	1,160	29%	14	< 1%	0	0%	0	0%

Figure 9

Award Attainment of Fall 1980 Entrants
Cumulative Percent Earning A.A. Degrees

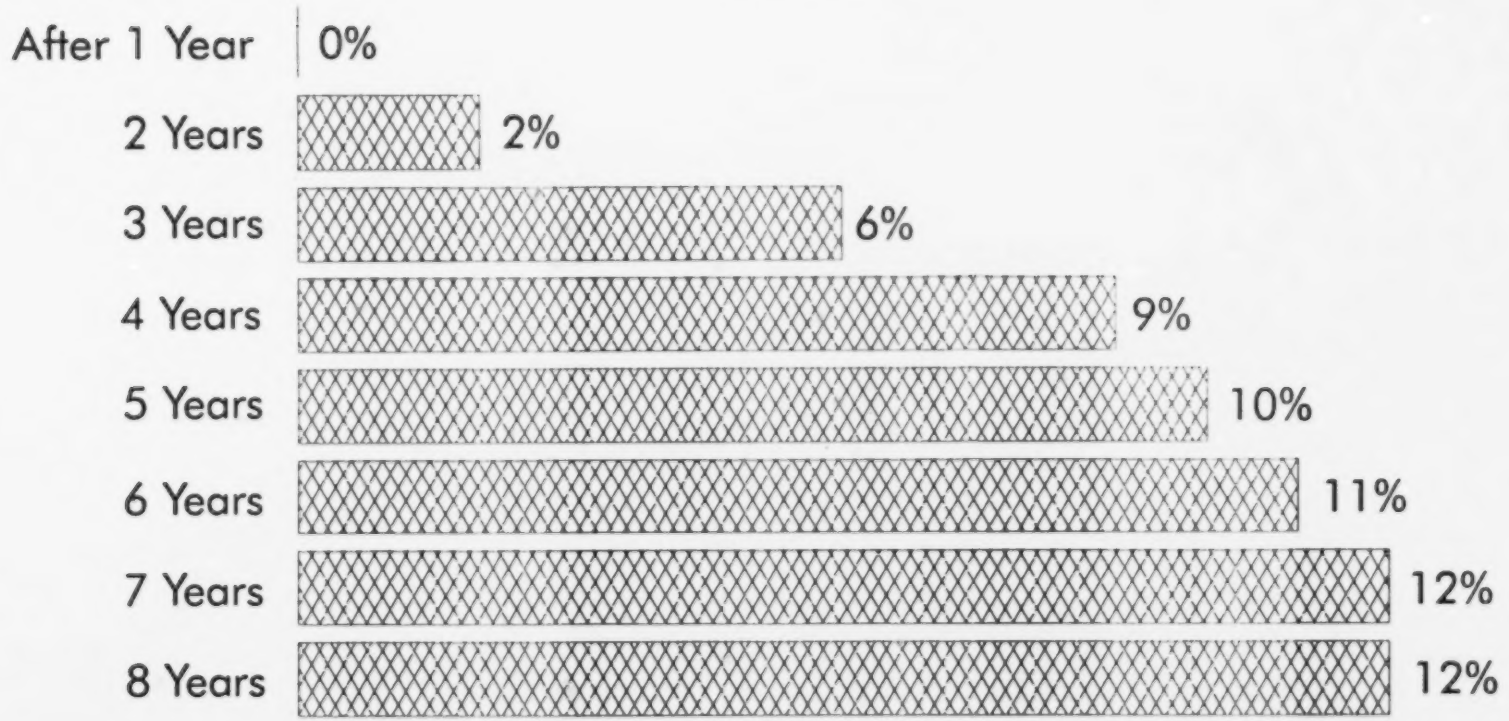


Figure 10

can encourage the growth of organizational knowledge by repeating the findings of sound research when pertinent. This is especially important if the findings go against the conventional campus wisdom.

The above principles largely apply to written reports, and to a lesser extent, oral presentations of research information. If a campus is networked, a computerized decision support system for enrollment management can be implemented providing immediate access to PMIs and summaries of policy research. Discussion of decision support systems and networks is beyond the scope of this essay, but the AIR professional file and journals contain useful articles on the subjects.

Conclusion

Efforts to influence the magnitude and composition of campus enrollments depend on timely, accurate information. Data are needed for monitoring the ongoing enrollment picture, as well as for investigating in detail student decisionmaking concerning college choice and persistence. This essay has argued that institutional research is an essential, if not the key, member of the enrollment management team. Hopefully the suggestions and examples included here will contribute to improving institutional research support of campus enrollment management.

References

Bers, T. H., ed. (1989). Using Student Tracking Systems Effectively. New Directions for Community Colleges, No. 66. San Francisco: Jossey-Bass.

Claffey, M. A., and Hossler, D. (1986). An integrated enrollment management system. In D. Hossler (ed.), Managing College Enrollments. New Directions for Higher Education, No. 53. San Francisco: Jossey-Bass.

Clagett, C. A., and Huntington, R. B. (1990). The Institutional Research Practitioner: A Guidebook to Effective Performance. Silver Spring, MD: Red Inc. Publications.

Cope, R., and Hannah, W. (1975). Revolving College Doors: The Causes and Consequences of Dropping Out, Stopping Out, and Transferring. New York: Wiley.

Costello, D. J. (1989). The development of a performance indicator system: A new direction for enrollment management. In Bringing Technology to the Issues. Proceedings of the 16th annual conference, North East Association for Institutional Research.

Davis-Van Atta, D. L., and Carrier, S. C. (1986). Using the institutional research office. In D. Hossler (ed.), Managing College Enrollments. New Directions for Higher Education, No. 53. San Francisco: Jossey-Bass.

Dolence, M. G. (1989-90). Evaluation criteria for an enrollment management program. Planning for Higher Education 18(1): 1-13.

Dolence, M. G., Miyahara, D. H., Grajeda, J., and Rapp, C. (1987-88). Strategic enrollment management and planning. Planning for Higher Education 16(3): 55-74.

Ewell, P. T. (1987). Principles of longitudinal enrollment analysis: Conducting retention and student flow studies. In J. A. Muffo and G. W. McLaughlin (eds.), A Primer on Institutional Research. Tallahassee: Association for Institutional Research.

Ewell, P. T., Parker, R., and Jones, D. P. (1988). Establishing a Longitudinal Student Tracking System: An Implementation Handbook. Boulder, Colorado: National Center for Higher Education Management Systems.

Glover, R. H. (1986). Designing a decision-support system for enrollment management. Research in Higher Education 24(1): 15-34.

Hossler, D. (1984). Enrollment Management: An Integrated Approach. New York: College Entrance Examination Board.

Hossler, C. (1987a). Creating Effective Enrollment Management Systems. New York: College Entrance Examination Board.

Hossler, D. (1987b). Enrollment management: Institutional applications. College and University 62(2): 106-116.

Hossler, D., and Kemerer, F. (1986). Enrollment management and its context. In D. Hossler (ed.), Managing College Enrollments. New Directions for Higher Education, No. 53. San Francisco: Jossey-Bass.

Huff, R. P. (1989). Facilitating and applying research in student financial aid to institutional objectives. In R. H. Fenske (ed.), Studying the Impact of Student Aid on Institutions. New Directions for Institutional Research, No. 62. San Francisco: Jossey-Bass.

Kemerer, F. R., Baldridge, V. J., and Green, K. C. (1982). Strategies for Enrollment Management. Washington, DC: American Association of State Colleges and Universities.

Lay, R. S., and Endo, J. J., eds. (1987). Designing and Using Market Research. New Directions for Institutional Research, No. 54. San Francisco: Jossey-Bass.

Leslie, L. L., and Brinkman, P. T. (1987). Student price response in higher education. Journal of Higher Education 58(2): 181-203.

Litten, L. H., ed. (1984). Issues in Pricing Undergraduate Education. New Directions for Institutional Research, No. 42. San Francisco: Jossey-Bass.

Litten, L. H., Sullivan, D., and Brodigan, D. L. (1983). Applying Market Research in College Admissions. New York: College Entrance Examination Board.

Novak, T., and Weiss, D. (1984). A national study of enrollment management practices of colleges. Paper presented at the College Board Annual Forum, New York.

Palmer, J. (1990). Accountability through Student Tracking: A Review of the Literature. Washington, D.C.: American Association of Community and Junior Colleges.

Pantages, J., and Creedon, F. (1978). Studies of college attrition, 1950-1975. Review of Educational Research (Winter): 49-101.

Pascarella, E. T., ed. (1982). Studying Student Attrition. New Directions for Institutional Research, No. 36. San Francisco: Jossey-Bass.

Porter, J. D., and Barberini, P. G. (1989). Collaboration between

institutional researchers and student financial aid officers in developing student persistence policy. In R. H. Fenske (ed.), Studying the Impact of Student Aid on Institutions. New Directions for Institutional Research, No. 62. San Francisco: Jossey-Bass.

Spady, W. (1970). Dropouts from higher education: An interdisciplinary review and synthesis. Interchange 1: 109-121.

Tinto, V. (1987). Leaving College. Chicago: University of Chicago Press.

Williams, T. E. (1986). Optimizing student-institution fit. In D. Hossler (ed.), Managing College Enrollments. New Directions for Higher Education, No. 53. San Francisco: Jossey-Bass.

Zemsky, R., and Oedel, P. (1983). The Structure of College Choice. New York: College Entrance Examination Board.

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